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INTRA-BLOC AND INTERNATIONAL TELECOMMUNICATIONS OF THE SINO-SOVIET BLOC 1950–65

(SUPPLEMENT)

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FOREWORD

This report is a supplement to Intra-Bloc and International Telecommunications of the Sino-Soviet Bloc, 1950-65, June 1961, SECRET, presenting new data of high validity on the planned intra-Bloc and international semiautomatic telephone network. This report also shows the growth of television facilities of the International Radiobroadcasting and Television Organization (OIRT). In addition, two maps depicting the present status of high-capacity telecommunications lines in the Soviet Bloc, prepared by the Electronics and Telecommunications Subcommittee of the Economic Intelligence Committee, have been included as background.

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INTRA-BLOC AND INTERNATIONAL TELECOMMUNICATIONS OF THE SINO-SOVIET BLOC 1950-65*

(SUPPLEMENT)

I. Planned Intra-Bloc and International Semiautomatic Telephone System

The USSR and the European Satellites, along with Yugoslavia, intend to establish a semiautomatic (operator distance dialing) and later a fully automatic (subscriber distance dialing) long-distance telephone network that will interconnect the capital cities of all the European Communist countries with one another and with the capitals of most of the remaining countries of Europe. The network was first proposed at a meeting in December 1957 of the Organization for Cooperation Among the Socialist Countries in the Fields of Post and Communications (OSS)** in Moscow. 2/ At this meeting, attended by the ministers of communications of the various countries of the Soviet Bloc*** and Yugoslavia, Resolution No. 7 was drafted calling for the preparation of a plan for the proposed telephone network. Two additional meetings, one in Prague in 1958 and one in Budapest in 1960, established the general concept of the network and delegated to Czechoslovakia the primary responsibility for preparing "technical conditions." Specifications were to be submitted for approval to the OSS and then to the Chairman of Section 9 of CEMA by March 1961. 3/

At the OSS meeting in June 1961 in Prague, the plan for routing of telephone traffic over the semiautomatic telephone network was submitted and approved. 4/ The suggestions and opinions of the USSR, Hungary, East Germany, and Poland were incorporated in the plan submitted by Czechoslovakia. Although completion of the semiautomatic network originally was planned for 1963, an extension of the completion date to 1964 was allowed. The original planned completion dates for each country are given in Appendix A. The fully automatic network will be completed in approximately 10 years.

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* The estimates and conclusions in this report represent the best judgment of this Office as of 1 March 1962.

** For a description of the membership, organization, and functions of OSS and Section 9 of the Council for Mutual Economic Assistance (CEMA), see source 1/. (For serially numbered source references, see Appendix B.)

*** For the purposes of this report the Soviet Bloc encompasses the USSR, Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Rumania.

The semiautomatic network, as approved, will encompass the following:

1. Both direct and alternate routing will be employed. 5/

2. Flexible switching between transit centers will be available. 6/

3. On all direct routes an allowance of 10 percent additional capacity will be made available -- 5 percent for alternate routing and 5 percent for emergency routing. 7/

4. Preselection of alternate routes will be established. 8/

5. Twelve-telephone channel carrier-frequency equipment will be utilized. 9/

6. Standards of the International Telegraph and Telephone Consultative Committee (CCITT) and the International Electrotechnical Commission (IEC) will be observed. 10/

7. Crossbar telephone exchange equipment will be employed.

The fully automatic network, to be completed in about 10 years, will incorporate "contactless" (electronic) telephone exchanges utilizing high-frequency transistors and semiconductors in the then operational semiautomatic network. 11/ Problems in research and development, however, have so far prevented the setting of a specific date for the completion of the fully automatic network.

Transmission facilities to be employed in the network will include microwave radio relay, multiconductor and coaxial cable, and open wire lines. 12/ Specifications for the use of particular facilities on specific routes are not now known.

The terminal cities in the network, the number of channels between terminals, and the routings involved are shown in the chart, Figure 1.* A schematic presentation showing the total number of channels between major junction points is given on the map, Figure 2.** The status of high-capacity telecommunications facilities in the USSR and the European Satellites is shown on the maps, Figures 3 and 4.** In many cases the schematic routings shown in Figure 2 can be traced more precisely by reference to Figures 3 and 4. For the non-Bloc portion of the network, negotiations are still to be completed. 14/ The general routing of traffic outside countries of the Soviet Bloc, therefore, is only tentative.

* Following p. 2.
** Inside back cover.

FIGURE 1

SOVIET BLOC: TERMINAL CITIES, ROUTINGS, AND NUMBERS OF CHANNELS IN THE PLANNED INTRA-BLOC AND INTERNATIONAL SEMIAUTOMATIC TELEPHONE NETWORK [a]

Total Channels	Terminals		Channels per Route	Routing	
12	Moscow	Belgrade	4	Moscow–Kishinev–Bucharest–Timişoara	Belgrade
			7	Moscow–L'vov–Mukachevo–Budapest–Szeged	Belgrade
			1	Moscow–L'vov–Chernovtsy–Bucharest–Timişoara	Belgrade
4	Moscow	Bern	3	Moscow–L'vov–Košice–Brno–Prague–Vyšší Brod–Linz–Innsbruck	Bern
			1	Moscow–L'vov–Katowice–Ostrava–Brno–Prague–Vyšší Brod–Linz–Innsbruck	Bern
6	Moscow	Brussels	4	Moscow–Brest–Warsaw–Poznań–Frankfurt/O–E. Berlin–Magdeburg–Bonn	Brussels
			2	Moscow–L'vov–Katowice–Poznań–Frankfurt/O–E. Berlin–Erfurt–Frankfurt/M–Luxembourg–Bonn	Brussels
14	Moscow	Bucharest	10	Moscow–Kishinev	Bucharest
			4	Moscow–L'vov–Chernovtsy	Bucharest
13	Moscow	Budapest	13	Moscow–L'vov–Mukachevo	Budapest
4	Moscow	Copenhagen	4	Moscow–Brest–Warsaw–Koszalin	Copenhagen
30	Moscow	E. Berlin	6	Moscow–Brest–Warsaw–Poznań–Frankfurt/O	E. Berlin
			10	Moscow–L'vov–Katowice–Ostrava–Brno–Prague–Dresden	E. Berlin
12	Moscow	Frankfurt/M	3	Moscow–Brest–Warsaw–Poznań–Frankfurt/O–E. Berlin–Erfurt	Frankfurt/M
			4	Moscow–Brest–Warsaw–Poznań–Frankfurt/O–E. Berlin–Magdeburg	Frankfurt/M
			5	Moscow–L'vov–Katowice–Poznań–Frankfurt/O–E. Berlin–Erfurt	Frankfurt/M
14	Moscow	Helsinki	14	Moscow–Tallin	Helsinki
7	Moscow	London	3	Moscow–Brest–Warsaw–Koszalin–Copenhagen	London
			2	Moscow–Brest–Warsaw–Poznań–Frankfurt/O–E. Berlin–Magdeburg–Bonn–Brussels	London
			2	Moscow–L'vov–Katowice–Poznań–Frankfurt/O–E. Berlin–Erfurt–Frankfurt/M–Luxembourg–Bonn–Brussels	London
3	Moscow	Oslo	2	Moscow–Tallin–Helsinki–Stockholm	Oslo
			1	Moscow–Brest–Warsaw–Koszalin–Copenhagen	Oslo
6	Moscow	Paris	4	Moscow–Brest–Warsaw–Poznań–Frankfurt/O–E. Berlin–Erfurt–Frankfurt/M–Luxembourg	Paris
			2	Moscow–L'vov–Katowice–Poznań–Frankfurt/O–E. Berlin–Erfurt–Frankfurt/M–Luxembourg	Paris
24	Moscow	Prague	13	Moscow–L'vov–Košice–Brno	Prague
			11	Moscow–L'vov–Katowice–Ostrava–Brno	Prague
6	Moscow	Rome	3	Moscow–L'vov–Košice–Brno–Prague–Vyšší Brod–Linz–Innsbruck	Rome
			3	Moscow–L'vov–Katowice–Ostrava–Brno–Prague–Vyšší Brod–Linz–Innsbruck	Rome
11	Moscow	Sofia	7	Moscow–Kishinev–Bucharest–Ruse	Sofia
			4	Moscow–L'vov–Chernovtsy–Bucharest–Ruse	Sofia
7	Moscow	Stockholm	2	Moscow–Tallin–Helsinki	Stockholm
			5	Moscow–Brest–Warsaw–Koszalin–Copenhagen	Stockholm
3	Moscow	Tirana	3	Moscow–L'vov–Mukachevo–Budapest–Szeged–Belgrade	Tirana
6	Moscow	Vienna	3	Moscow–L'vov–Košice–Brno–Prague–Vyšší Brod–Linz	Vienna
			3	Moscow–L'vov–Katowice–Ostrava–Brno–Prague–Vyšší Brod–Linz	Vienna
36	Moscow	Warsaw	30	Moscow–Brest	Warsaw
			4	Moscow–L'vov–Tomaszów	Warsaw
6	Warsaw	Amsterdam	6	Warsaw–Poznań–Frankfurt/O–E. Berlin–Magdeburg	Amsterdam
14	Warsaw	Belgrade	14	Warsaw–Košice–Budapest–Szeged	Belgrade
8	Warsaw	Bern	8	Warsaw–Katowice–Ostrava–Brno–Prague–Vyšší Brod–Linz–Innsbruck	Bern
6	Warsaw	Brussels	6	Warsaw–Poznań–Frankfurt/O–E. Berlin–Erfurt–Frankfurt/M–Luxembourg–Bonn	Brussels
5	Warsaw	Bucharest	5	Warsaw–Tomaszów–L'vov–Chernovtsy	Bucharest
10	Warsaw	Budapest	10	Warsaw–Košice–Miskolc	Budapest
6	Warsaw	Copenhagen	6	Warsaw–Koszalin	Copenhagen
30	Warsaw	E. Berlin	16	Warsaw–Stettin	E. Berlin
			14	Warsaw–Poznań–Frankfurt/O	E. Berlin
8	Warsaw	Frankfurt/M	8	Warsaw–Poznań–Frankfurt/O–E. Berlin–Erfurt	Frankfurt/M
6	Warsaw	Helsinki	6	Warsaw–Koszalin–Copenhagen–Stockholm	Helsinki
11	Warsaw	London	4	Warsaw–Koszalin–Copenhagen	London
			7	Warsaw–Poznań–Frankfurt/O–E. Berlin–Magdeburg–Bonn–Brussels	London
36	Warsaw	Moscow	36	(see Moscow–Warsaw)	Moscow
6	Warsaw	Oslo	6	Warsaw–Koszalin–Copenhagen	Oslo
8	Warsaw	Paris	8	Warsaw–Poznań–Frankfurt/O–E. Berlin–Erfurt–Frankfurt/M–Luxembourg	Paris
34	Warsaw	Prague	34	Warsaw–Katowice–Ostrava–Brno	Prague
6	Warsaw	Rome	6	Warsaw–Katowice–Ostrava–Brno–Prague–Vyšší Brod–Linz–Innsbruck	Rome
6	Warsaw	Sofia	6	Warsaw–Tomaszów–L'vov–Chernovtsy–Bucharest–Ruse	Sofia
8	Warsaw	Stockholm	8	Warsaw–Koszalin–Copenhagen	Stockholm
8	Warsaw	Tirana	8		Tirana
10	Warsaw	Vienna	10	Warsaw–Katowice–Ostrava–Brno–Prague–Vyšší Brod–Linz	Vienna
6	E. Berlin	Amsterdam	6	E. Berlin–Magdeburg	Amsterdam
10	E. Berlin	Belgrade	10	E. Berlin–Dresden–Prague–Brno–Košice–Miskolc–Budapest–Szeged	Belgrade
11	E. Berlin	Bern	11	E. Berlin–Plauen–Nürnberg	Bern
6	E. Berlin	Brussels	6	E. Berlin–Magdeburg–Bonn	Brussels
8	E. Berlin	Bucharest	8	E. Berlin–Frankfurt/O–Poznań–Warsaw–Tomaszów–L'vov–Chernovtsy	Bucharest
8	E. Berlin	Budapest	8	E. Berlin–Dresden–Prague–Brno–Košice–Miskolc	Budapest
16	E. Berlin	Copenhagen	16	E. Berlin–Rostock	Copenhagen
6	E. Berlin	London	6	E. Berlin–Magdeburg–Bonn–Brussels	London *
30	E. Berlin	Moscow	30	(see Moscow–E. Berlin)	Moscow
3	E. Berlin	Oslo	3	E. Berlin–Rostock–Copenhagen	Oslo
8	E. Berlin	Paris	8	E. Berlin–Erfurt–Frankfurt/M–Luxembourg–Bonn–Brussels	Paris
24	E. Berlin	Prague	24 *	E. Berlin–Dresden	Prague
7	E. Berlin	Sofia	7	E. Berlin–Dresden–Prague–Brno–Košice–Miskolc–Budapest–Bucharest–Ruse	Sofia
10	E. Berlin	Stockholm	10	E. Berlin–Stralsund	Stockholm
6	E. Berlin	Tirana	6		Tirana
12	E. Berlin	Vienna	12	E. Berlin–Dresden–Prague–Vyšší Brod–Linz	Vienna
30	E. Berlin	Warsaw	30	(see Warsaw–E. Berlin)	Warsaw
6	Prague	Amsterdam	6	Prague–Plzeň–Bor–Nürnberg–Frankfurt/M–Luxembourg–Bonn	Amsterdam
12	Prague	Belgrade	12	Prague–Brno–Košice–Miskolc–Budapest–Szeged	Belgrade

* One channel from West Berlin.

Total Channels	Terminals		Channels per Route	Routing	
11	Prague	Bern	7	Prague–Plzeň–Bor–Nürnberg	Bern
			4	Prague–Vyšší Brod–Linz–Innsbruck	Bern
7	Prague	Brussels	7	Prague–Plzeň–Bor–Nürnberg–Frankfurt/M–Luxembourg–Bonn	Brussels
13	Prague	Bucharest	13	Prague–Brno–Košice–Miskolc–Budapest–Debrecen	Bucharest
12	Prague	Budapest	12	Prague–Brno–Košice–Miskolc	Budapest
6	Prague	Copenhagen	6	Prague–Dresden–E. Berlin–Rostock	Copenhagen
21	Prague	E. Berlin	21	(see E. Berlin–Prague)	E. Berlin
14	Prague	Frankfurt/M	14	Prague–Plzeň–Bor–Nürnberg	Frankfurt
14	Prague	London	14	Prague–Plzeň–Bor–Nürnberg–Frankfurt/M–Luxembourg–Bonn–Brussels	London
24	Prague	Moscow	24	(see Moscow–Prague)	Moscow
6	Prague	Paris	6	Prague–Plzeň–Bor–Nürnberg–Frankfurt/M–Luxembourg–Bonn–Brussels	Paris
7	Prague	Rome	7	Prague–Vyšší Brod–Linz–Innsbruck	Rome
12	Prague	Sofia	12	Prague–Brno–Košice–Miskolc–Budapest–Debrecen–Bucharest–Ruse	Sofia
7	Prague	Stockholm	7	Prague–Dresden–Berlin–Stralsund	Stockholm
6	Prague	Tirana	6		Tirana
7	Prague	Vienna	7	Prague–Vyšší Brod–Linz	Vienna
34	Prague	Warsaw	34	(see Warsaw–Prague)	Warsaw
3	Budapest	Amsterdam	3	Budapest–Miskolc–Košice–Brno–Prague–Plzeň–Bor–Nürnberg–Frankfurt/M–Luxembourg–Bonn	Amsterdam
8	Budapest	Belgrade	8	Budapest–Szeged	Belgrade
8	Budapest	Bern	8	Budapest–Győr–Vienna–Linz–Innsbruck	Bern
3	Budapest	Brussels	3	Budapest–Miskolc–Košice–Brno–Prague–Bor–Nürnberg–Frankfurt/M–Luxembourg–Bonn	Brussels
12	Budapest	Bucharest	12	Budapest–Debrecen	Bucharest
6	Budapest	E. Berlin	6	(see E. Berlin–Budapest)	E. Berlin
7	Budapest	Frankfurt/M	7	Budapest–Miskolc–Košice–Brno–Prague–Plzeň–Bor–Nürnberg	Frankfurt
4	Budapest	London	4	Budapest–Győr–Vienna–Linz–Innsbruck–Nürnberg–Frankfurt/M–Luxembourg–Bonn–Brussels	London
13	Budapest	Moscow	13	(see Moscow–Budapest)	Moscow
3	Budapest	Paris	3	Budapest–Győr–Vienna–Linz–Innsbruck–Nürnberg–Frankfurt/M–Luxembourg	Paris
12	Budapest	Prague	12	(see Prague–Budapest)	Prague
4	Budapest	Rome	4	Budapest–Győr–Vienna	Rome
6	Budapest	Sofia	6	Budapest–Debrecen–Bucharest–Ruse	Sofia
3	Budapest	Stockholm	3	Budapest–Miskolc–Košice–Brno–Prague–Dresden–E. Berlin–Stralsund	Stockholm
6	Budapest	Tirana	6		Tirana
13	Budapest	Vienna	13	Budapest–Győr	Vienna
10	Budapest	Warsaw	10	(see Warsaw–Budapest)	Warsaw
6	Bucharest	Athens	6	Bucharest–Ruse–Sofia	Athens
10	Bucharest	Belgrade	10	Bucharest–Timişoara	Belgrade
6	Bucharest	Bern	6	Bucharest–Debrecen–Budapest–Győr–Vienna–Linz–Innsbruck	Bern
13	Bucharest	Budapest	13	(see Budapest–Bucharest)	Budapest
9	Bucharest	E. Berlin	9	(see E. Berlin–Bucharest)	
7	Bucharest	Frankfurt/M	7	Bucharest–Debrecen–Budapest–Győr–Vienna–Linz–Innsbruck–Nürnberg	Frankfurt
5	Bucharest	Istanbul	5	Bucharest–Ruse–Sofia	Istanbul
4	Bucharest	London	4	Bucharest–Debrecen–Budapest–Győr–Vienna–Linz–Innsbruck–Nürnberg–Frankfurt/M–Luxembourg–Bonn–Brussels	London
14	Bucharest	Moscow	14	(see Moscow–Bucharest)	Moscow
8	Bucharest	Paris	8	Bucharest–Debrecen–Budapest–Győr–Vienna–Linz–Innsbruck–Nürnberg–Frankfurt/M–Luxembourg	Paris
13	Bucharest	Prague	13	(see Prague–Bucharest)	Bucharest
4	Bucharest	Rome	4	Bucharest–Timişoara–Belgrade	Rome
13	Bucharest	Sofia	13	Bucharest–Ruse	Sofia
6	Bucharest	Tirana	6		Tirana
6	Bucharest	Vienna	6	Bucharest–Debrecen–Budapest–Győr	Vienna
5	Bucharest	Warsaw	5	(see Warsaw–Bucharest)	Warsaw
4	Sofia	Athens	4	Sofia–Dragoman	Athens
12	Sofia	Belgrade	12	Sofia–Dragoman	Belgrade
13	Sofia	Bucharest	13	(see Bucharest–Sofia)	Bucharest
6	Sofia	Budapest	6	(see Budapest–Sofia)	Budapest
7	Sofia	E. Berlin	7	(see E. Berlin–Sofia)	E. Berlin
4	Sofia	Istanbul	4	Sofia–Svilengrad	Istanbul
11	Sofia	Moscow	11	(see Moscow–Sofia)	Moscow
12	Sofia	Prague	12	(see Prague–Sofia)	Prague
6	Sofia	Tirana	6		Tirana
4	Sofia	Vienna	4	Sofia–Dragoman–Belgrade–Győr	Vienna
6	Sofia	Warsaw	6	(see Warsaw–Sofia)	Warsaw
10	Belgrade	Bucharest	10	(see Bucharest–Belgrade)	Bucharest
8	Belgrade	Budapest	8	(see Budapest–Belgrade)	Budapest
10	Belgrade	E. Berlin	10	(see E. Berlin–Belgrade)	E. Berlin
13	Belgrade	Moscow	13	(see Moscow–Belgrade)	Moscow
12	Belgrade	Prague	12	(see Prague–Belgrade)	Prague
12	Belgrade	Sofia	12	(see Sofia–Belgrade)	Sofia
2	Belgrade	Tirana	2	Belgrade	Tirana
16	Belgrade	Warsaw	16	(see Warsaw–Belgrade)	Warsaw
2	Tirana	Belgrade	2	(see Belgrade–Tirana)	Tirana
6	Tirana	Bucharest	6		Bucharest
6	Tirana	Budapest	6		Budapest
6	Tirana	E. Berlin	6		E. Berlin
3	Tirana	Moscow	3	(see Moscow–Tirana)	Moscow
6	Tirana	Prague	6		Prague
6	Tirana	Sofia	6		Sofia
6	Tirana	Warsaw	6		Warsaw

When completed, the planned semiautomatic and later fully automatic telephone network will improve substantially the exchange of telephone traffic among countries of the Soviet Bloc and between these countries and the other areas of Europe. Furthermore, the transmission facilities that this network will use provide substantially more capacity on many routes than that needed strictly for international telephone service. This additional capacity probably will be used for international telegraph* and other telecommunications services as well as for domestic service.

II. International Radiobroadcasting and Television Organization (OIRT)

The OIRT is an organization dominated by the Soviet Bloc that effects cooperation among the Bloc and some non-Bloc member countries in the field of radiobroadcasting and television.** An outgrowth of the International Broadcasting Organization (OIR),*** the OIRT considers problems of common concern to its members and sponsors cooperative action for their solution. Through its technical, program, and television commissions it recommends operating standards and procedures. It also encourages the exchange of information among member countries. The OIRT cooperates with the International Telecommunication Union (ITU); the EBU; the United Nations Economic, Scientific, and Cultural Organization (UNESCO); and the International Film and Television Council. 15/

One of the most important actions taken by the OIRT thus far has been the approval in January 1960 of the establishment of a Bloc-wide television network to be known as "Intervision." Czechoslovakia, East Germany, Poland, and Hungary were the initial members of Intervision, followed shortly thereafter by the USSR. Bulgaria and Rumania are expected to join sometime in 1962, and it is anticipated that the Far Eastern members of OIRT will eventually participate in Intervision. It has been the intention since the beginning that Intervision would exchange live television programs with Eurovision, the Western European television network sponsored by the EBU. Although more than 200 live programs have been exchanged between the two networks since April 1961, the majority have involved only Czechoslovakia and East Germany on the OIRT side. The growth of television transmitters and receivers in OIRT member countries during the period 1951-60 is summarized in the chart, Figure 5.† 16/

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* As many as 24 sixty-word-per-minute teletype channels can be derived from 1 telephone channel.

** Finland, Iraq, Egypt (UAR), Cuba, and Mali are the non-Bloc members of the OIRT.

*** The OIR was originally formed in 1946 and had a membership of 28 European countries. As the USSR and other member countries from the Bloc began to use the organization for political purposes, however, all non-Bloc countries except Finland withdrew and formed the European Broadcasting Union (EBU).

† Following p. 4.

Two factors have limited the scope of Intervision to date -- the relatively slow development of television in the more underdeveloped countries of the Bloc and the limited transmission facilities available for exchanging live programs across national borders. Although intra-Bloc and international microwave radio relay and coaxial cable facilities capable of carrying television programs are now being introduced, it will be some years, probably not before 1965, before planned networks will be sufficiently completed to enable the full interchange of television programs among all OIRT member countries and between all OIRT and EBU members.

III. Implications

The basic report to which this report is a supplement treated in some detail the rather ambitious plans of the Soviet Bloc to build integrated networks of telecommunications during the 1959-65 period. These networks, employing modern technologies, are intended to carry telephone, telegraph, television, and newer services such as data signals. The intra-Bloc networks, additionally, are intended to interconnect with similar facilities in adjacent countries, expecially in Western Europe. To achieve this end in the easiest manner, the technical parameters of the network adhere to international (ITU/CCITT) standards.

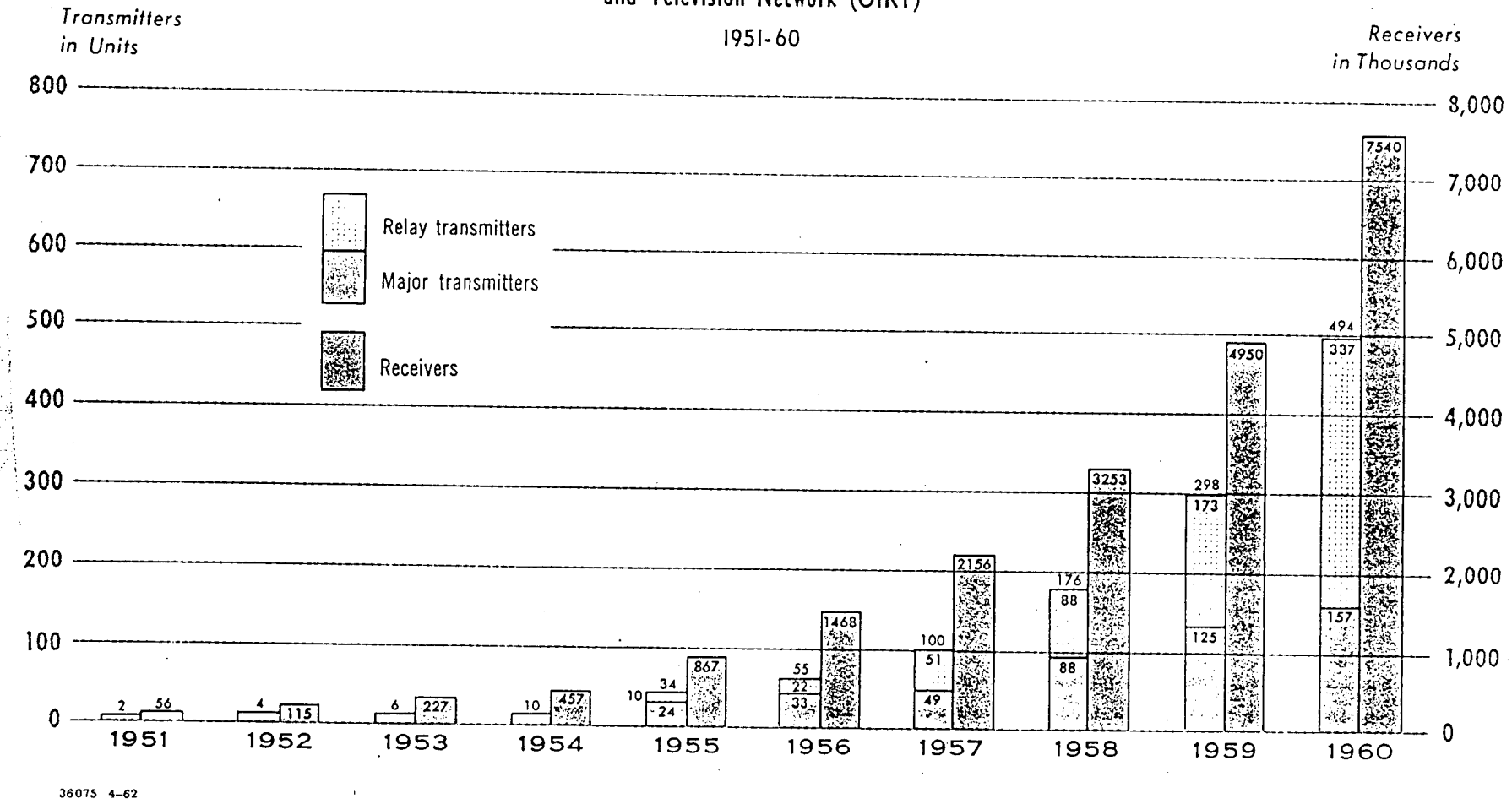
There are clear indications that these plans are in fact being implemented. The intra-Bloc semiautomatic telephone network now being built probably will be completed by 1964. At the same time, the Intervision television network is being extended section by section. The evidence also is clear that when the transmission lines for these networks are built, facilities will be included for international connections as well.

It is concluded from this performance that the Bloc was indeed serious in intention when it formulated these ambitious plans. The intra-Bloc facilities certainly will aid in the achievement of tighter cohesion between the countries of the Bloc in the conduct of their mutual affairs. The provision of international connections to these facilities seems to show patently that the Bloc expects to increase its communications with the outside world, especially Western Europe.

Figure 5

Television Transmitters and Receivers in Countries Belonging to the International Radiobroadcasting and Television Network (OIRT)

1951-60



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APPENDIX A

COMPLETION DATES FOR EXCHANGES AND CIRCUITS IN THE PLANNED INTRA-BLOC AND INTERNATIONAL SEMIAUTOMATIC TELEPHONE NETWORK OF THE SOVIET BLOC a/

Semiautomatic Telephone Exchanges			International Telephone Circuits	
Country	City	Year b/	Connection c/	Year b/
USSR	Moscow	1962	To all countries	1961/62
Poland	Warsaw	1963	To Finland, Sweden, Norway, and Denmark	Already completed for manual operation
			To all remaining countries	1962/63
East Germany	East Berlin	1963	To all countries	1963
Czechoslovakia	Prague	1963	To all countries	1963
Hungary	Budapest	1963	To East Germany, Poland, USSR, Czechoslovakia, Sweden, Belgium, Great Britain, Italy, and Switzerland	1961
			To France, West Germany, Austria, and Holland	1962
			To Bulgaria, Rumania, and Yugoslavia	1963
Rumania	Bucharest	1963	To all countries	1963
Bulgaria	Sofia	1963	To all countries	1963

a. 17/
b. As the OSS gave a 1-year extension from 1963 to 1964 for completion of the over-all network, it is probable that some of the completion dates shown above have been changed.
c. The countries to be included in the network are shown on the map, Figure 2, inside back cover.

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APPENDIX C

SOURCE REFERENCES

Evaluations, following the classification entry and designated "Eval.," have the following significance:

Source of Information	Information
Doc. - Documentary	1 - Confirmed by other sources
A - Completely reliable	2 - Probably true
B - Usually reliable	3 - Possibly true
C - Fairly reliable	4 - Doubtful
D - Not usually reliable	5 - Probably false
E - Not reliable	6 - Cannot be judged
F - Cannot be judged	

"Documentary" refers to original documents of foreign governments and organizations; copies or translations of such documents by a staff officer; or information extracted from such documents by a staff officer, all of which may carry the field evaluation "Documentary."

Evaluations not otherwise designated are those appearing on the cited document; those designated "RR" are by the author of this report. No "RR" evaluation is given when the author agrees with the evaluation on the cited document.

Except for CIA finished intelligence, all sources are evaluated RR 2.

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